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Elabscience®

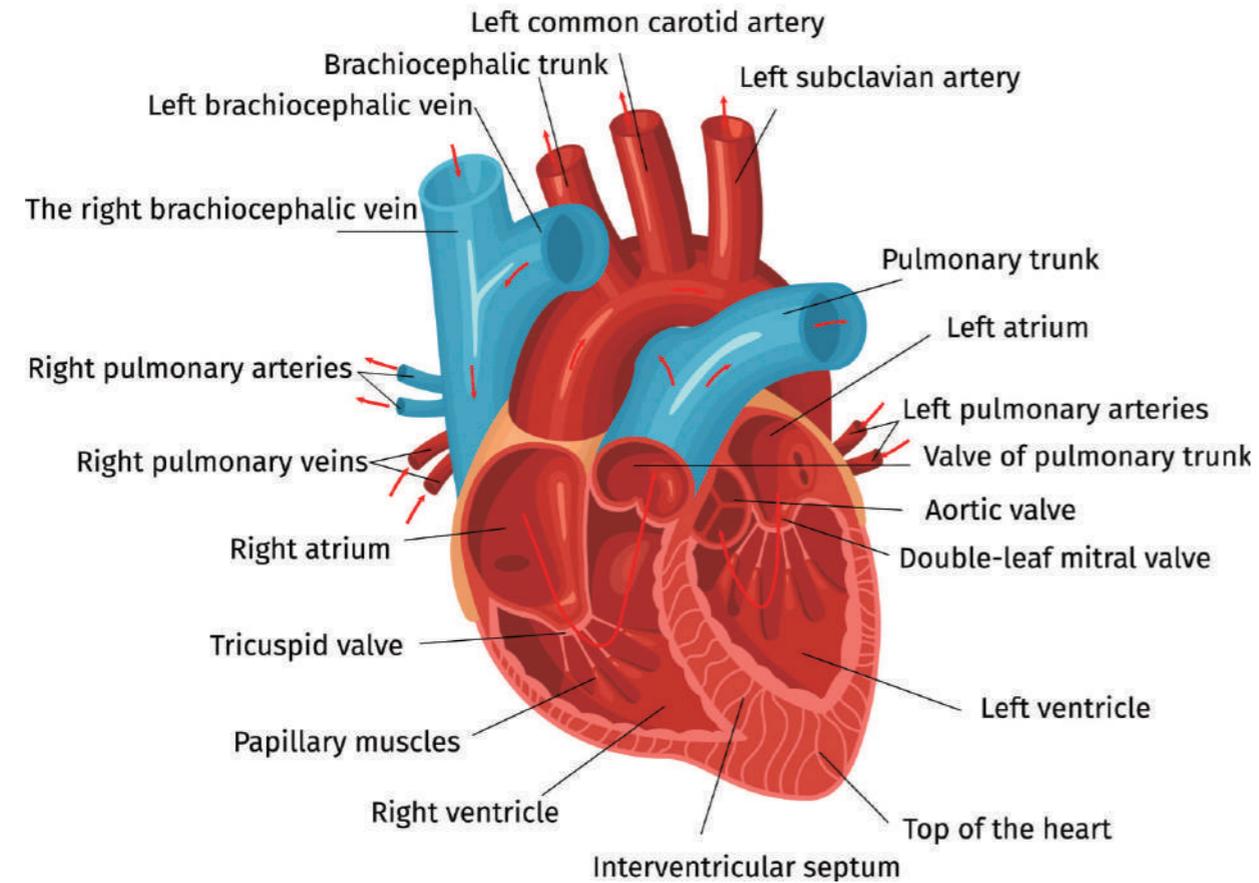
# ELISA Kits for Cardiovascular

Focus on your research Service for life science



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## BLOOD CIRCULATION IN THE HEART



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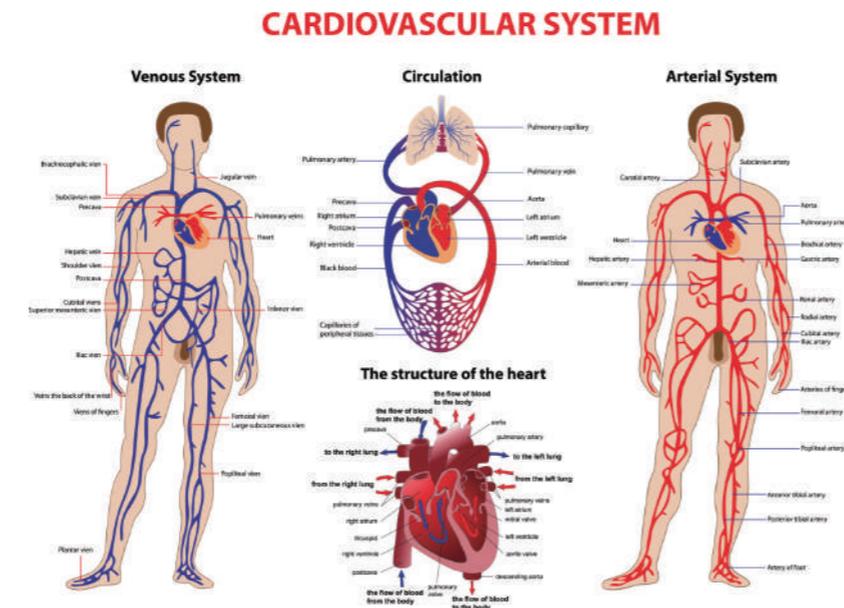
## Cardiovascular Introduction

The essential components of the human cardiovascular system are the heart, blood and blood vessels. It is a closed circulation pipe in which the blood flows, supplying oxygen, various nutrients, hormones, etc. to organs and tissues, and transporting the waste of tissue metabolism to the excretory organs, so as to maintain the homeostasis of the body's internal environment, the progress of metabolism and maintain normal life activities.

The cardiovascular system includes the pulmonary circulation, the systemic circulation, and the coronary circulation. The pulmonary circulation is part of the cardiovascular system which transports oxygen-depleted blood away from the heart, to the lungs, and returns oxygenated blood back to the heart. The systemic circulation is part of the cardiovascular system which transports oxygenated blood away from the heart, to the rest of the body, and returns oxygen-depleted blood back to the heart. Coronary circulation is another part of the cardiovascular system which refers to the movement of blood through the tissues of the heart. The coronary arteries refer to vessels that deliver oxygen-rich blood to the myocardium, while the coronary veins refer to vessels that remove the deoxygenated blood from

the heart muscle. The coronary arteries are classified as "end circulation", since they represent the only source of blood supply to the myocardium.

Cardiovascular diseases refer to a group of diseases involving the heart and blood vessels (arteries and veins), including atherosclerosis, arrhythmia, cardiomyopathy, heart failure, hypertension, coronary artery disease, coagulation disorders, etc. Elabscience® provides high quality ELISA kits to study multiple aspects of the cardiovascular system, including angiogenesis, blood pressure regulation, cholesterol metabolism, atherosclerosis, and more.



## Company Brief Introduction

### About Elabscience®

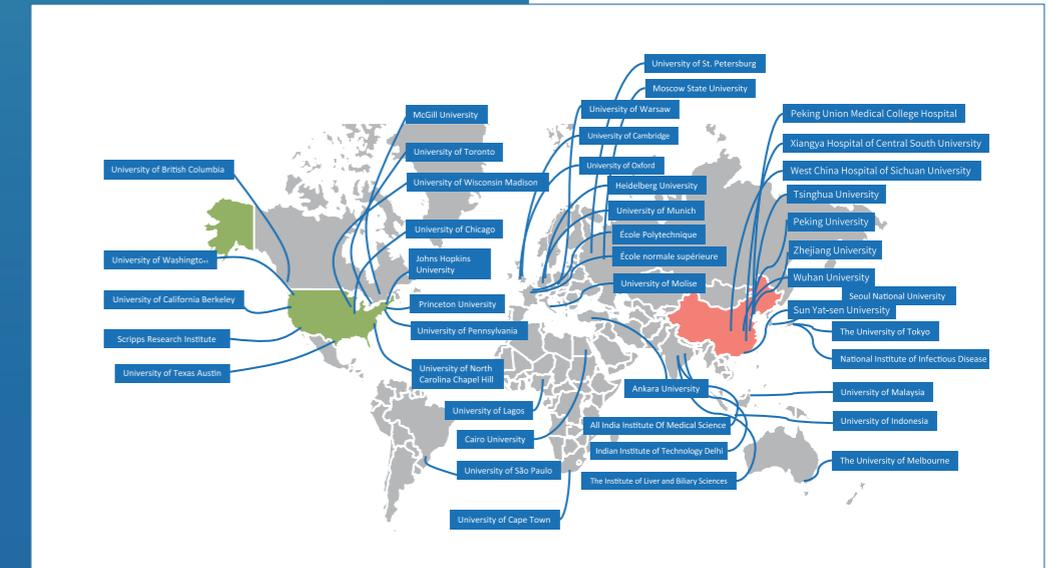
Elabscience® is a high-tech biological company specializing in the development, production and sales of immunoassay reagents. The main products are **ELISA Kits**,

**CLIA Kits, FCM Antibodies, Cell Function Assays, Metabolism Assay Kits, Antibodies, Proteins, Labeling Kits, Immunology Related Reagents**, etc.

-  **59** Invention patents
-  **12000+** SCI articles
-  **208** Utility model patents

### Customer Distribution

The customers are distributed in more than **150 countries** on **5 continents**, basically covering all famous universities and research institutions in the world.



## Why Choose Elabscience® ELISA Kits?



### Strict Quality Control

- 8 processes for strict quality control
- Superior performance guarantees



### Recommended by CiteAb

- Elabscience® was highly commended as "ELISA KIT SUPPLIER TO WATCH IN 2019" by CiteAb.



### Supported by 12000+ SCI Literature

- Elabscience® products have been cited in more than 12,000 SCI papers, and published in *Nature Medicine*, *Nature*, *Cell*, *Immunity*, *Molecular Cancer* and other internationally renowned journals.

### ELISA Kits Features

- ✓ High precision: Both inter and intra CV are <10%
- ✓ High sensitivity: Pg level
- ✓ Good specificity: Cross-reactivity <10%
- ✓ High precision over thousands of items: Covering various targets and species
- ✓ Flexible choices on size: 48T/96T/96T\*5/96T\*10
- ✓ One-step method available



Fig. ELISA Product Appearance Diagram

## Cardiovascular Research

### 01 Angiogenesis

Angiogenesis is the formation and remodelling of new blood vessels and capillaries from growth of pre-existing blood vessels. It mainly includes: a. Degradation of vascular basement membrane during activation; b. Activation, proliferation and migration of vascular endothelial cells; c. Reconstruction and formation of new blood vessels and blood vessel networks.

Angiogenesis is an important process of embryo growth and development, wound healing, granulation tissue formation and tumor occurrence and development, which involves the participation of various cells and molecules. It relies on extensive signal transduction networks between and within endothelial cells (ECs), their associated parietal cells (vascular smooth muscle cells and percutaneous cells), and other cell types (such as immune cells). The types of angiogenesis mainly include blastogenesis, non-blastogenesis and insertion.

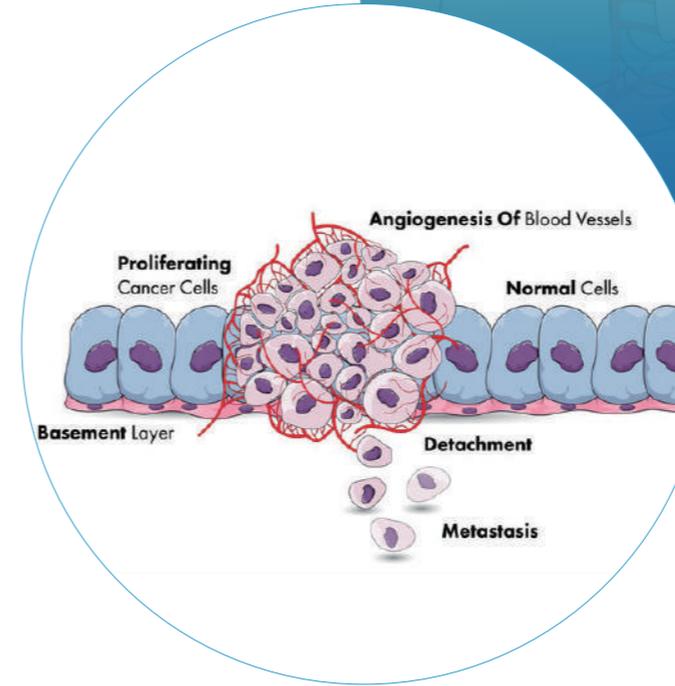


Fig.1 Diagram Showing the Angiogenesis: Mechanisms of Tumor Growth

## Angiogenesis

Targets	Cat.No.	Species
ACE(Angiotensin I Converting Enzyme)	E-EL-H6001/E-EL-M3013/E-EL-R2401	Human/Mouse/Rat
ACE2(Angiotensin I Converting Enzyme 2)	E-EL-H0281/E-EL-R2453	Human/Rat
AFGF/FGF1(Acidic Fibroblast Growth Factor 1)	E-EL-H0071	Human
AGER(Total Advanced Glycosylation End Product Specific Receptor)	E-EL-H0295/E-EL-M3018/E-EL-R0643/E-MSEL-M0019	Human/Mouse/Rat
ALCAM(Activated Leukocyte Cell Adhesion Molecule)	E-EL-H6032	Human
ANG1(Angiopoietin 1)	E-EL-H6119/E-EL-M3014/E-EL-R0626	Human/Mouse/Rat
ANG2(Angiopoietin 2)	E-EL-H0008/E-EL-M0098	Human/Mouse
ANG3(Angiopoietin 3)	E-EL-M0003	Mouse
ANGPTL2(Angiopoietin Like Protein 2)	E-EL-H6034/E-EL-M0092	Human/Mouse
ANGPTL3(Angiopoietin Like Protein 3)	E-EL-M2458/E-EL-R2449/E-EL-MK0648	Mouse/Rat/Monkey
ANGPTL4(Angiopoietin Like Protein 4)	E-EL-H0337/E-EL-M0093	Human/Mouse
bFGF/FGF2(Basic Fibroblast Growth Factor)	E-EL-H6042/E-EL-M0170/E-EL-R0091/E-EL-RB0858	Human/Mouse/Rat/Rabbit
BMP-1(Bone Morphogenetic Protein 1)	E-EL-H6044	Human
CCL1(Chemokine C-C-Motif Ligand 1)	E-EL-H0699/E-EL-M0263/E-EL-M3065	Human/Mouse
CXCR2(CXC-Chemokine Receptor 2)	E-EL-H2578	Human
CXCR3(CXC-Chemokine Receptor 3)	E-EL-H0854	Human
CXCR4(Chemokine C-X-C-Motif Receptor 4)	E-EL-H5490	Human
MIγ/CXCL9(Monocyte Interferon Gamma Inducing Factor)	E-EL-H6062	Human

Targets	Cat.No.	Species
CXCL15(Chemokine C-X-C-Motif Ligand 15)	E-EL-M0269	Mouse
CXCL16(Chemokine C-X-C-Motif Ligand 16)	E-EL-H6009/E-EL-M0270/E-EL-R0189	Human/Mouse/Rat
E-Cad(E-Cadherin)	E-EL-H0014/E-EL-M0211/E-EL-R0347	Human/Mouse/Rat
EPO(Erythropoietin)	E-EL-H3640/E-EL-M3058/E-EL-R0007/E-EL-MK0714	Human/Mouse/Rat/Monkey
FGF21(Fibroblast Growth Factor 21)	E-EL-H0074/E-EL-M0029/E-EL-RB0160/E-EL-MK1541	Human/Mouse/Rat/Monkey
HIF-1α(Hypoxia Inducible Factor 1 Alpha)	E-EL-H6066/E-EL-M0687/E-EL-R0513	Human/Mouse/Rat
HIF-2α(Hypoxia Inducible Factor 2 Alpha)	E-EL-H2468/E-EL-M0786	Human/Mouse
IP-10/CXCL10(Interferon Gamma Induced Protein 10kDa)	E-EL-H0050/E-EL-M0021/E-EL-R0546	Human/Mouse/Rat
I-TAC/CXCL11(Interferon Inducible T-Cell Alpha Chemoattractant)	E-EL-H0051/E-EL-M0056	Human/Mouse
ITGB3(Integrin Beta 3)	E-EL-H2203	Human
JAK1(Janus Kinase 1)	E-EL-H5552	Human
JAK2(Janus Kinase 2)	E-EL-H2239	Human
KLK7(Kallikrein 7)	E-EL-H0500	Human
MCP-1(Monocyte Chemotactic Protein 1)	E-EL-H6005/E-EL-M3001/E-EL-R0633/E-MSEL-M0012	Human/Mouse/Rat
MIP-1α(Macrophage Inflammatory Protein 1 Alpha)	E-EL-H0021/E-EL-M0007/E-EL-R0602	Human/Mouse/Rat
MIP-1β(Macrophage Inflammatory Protein 1 Beta)	E-EL-H0022/E-EL-R0603	Human/Rat
NRG-1(Neuregulin 1)	E-EL-H6092/E-EL-M0107	Human/Mouse
PDGF-AB(Platelet Derived Growth Factor AB)	E-EL-H1576	Human

Targets	Cat.No.	Species
PDGF-BB(Platelet Derived Growth Factor-BB)	E-EL-H1577/E-EL-M0632	Human/Mouse
PDGF-C(Platelet Derived Growth Factor C)	E-EL-M0920	Mouse
PDGF-D(Platelet Derived Growth Factor D)	E-EL-H2213/E-EL-M0921	Human/Mouse
SDF-1/CXCL12(Stromal Cell Derived Factor 1)	E-EL-H0052/E-EL-M3046/E-EL-R3027	Human/Mouse/Rat
Slit2(Slit Homolog 2)	E-EL-H0931	Human
TGF-β1(Transforming Growth Factor β1)	E-EL-0162	Universal
TGF-β2(Transforming Growth Factor β2)	E-EL-H1587/E-EL-M1191/E-EL-R1015	Human/Mouse/Rat
TGF-β3(Transforming Growth Factor β3)	E-EL-H2339/E-EL-M1192/E-EL-R1016	Human/Mouse/Rat
TIMP-1(Tissue Inhibitors of Metalloproteinase 1)	E-EL-H0184/E-EL-M3071/E-EL-R0540	Human/Mouse/Rat
VCAM-1/CD106(Vascular Cell Adhesion Molecule 1)	E-EL-H5587/E-EL-M1233/E-EL-R1061	Human/Mouse/Rat
VE-Cadherin(Vascular Endothelial Cadherin)	E-EL-H6103/E-EL-M0210/E-EL-R0130	Human/Mouse/Rat
VEGF-A(Vascular Endothelial Cell Growth Factor A)	E-EL-H0111/E-EL-M1292/E-EL-R2603/E-MSEL-M0005	Human/Mouse/Rat
VEGF-B(Vascular Endothelial Cell Growth Factor B)	E-EL-H2164/E-EL-M1229/E-EL-R1056	Human/Mouse/Rat
VEGF-C(Vascular Endothelial Growth Factor C)	E-EL-H1600/E-EL-M1230/E-EL-R1057	Human/Mouse/Rat
VEGF-D(Vascular Endothelial Growth Factor D)	E-EL-H1601/E-EL-M1231/E-EL-R1058	Human/Mouse/Rat
VEGFR1/FLT1(Vascular Endothelial Growth Factor Receptor 1)	E-EL-H6175/E-EL-M0648/E-EL-R0911	Human/Mouse/Rat
VEGFR-2/KDR(Vascular Endothelial Growth Factor Receptor 2)	E-EL-H1603/E-EL-M0649	Human/Mouse

## 02 Atherosclerosis

Atherosclerosis is a progressive disease of the vasculature that is a common underlying pathology in stroke and heart attack. It is characterized by chronic inflammation, oxidative stress, and lipid accumulation within the vessel wall. In atherosclerotic lesions, macrophages engulf large amounts of oxidized low-density lipoprotein (LDL) and transform into foam cells. Excessive proliferation and abnormal smooth muscle cells deposit proteoglycans around plaques, leading to calcification of blood vessel walls and arteriosclerosis. As the disease progresses, the fibrous cap on the surface of the plaque ruptures and forms a thrombus, which causes a blockage of the artery lumen, leading to an organ infarction. Risk factors for the development of atherosclerosis include high-fat diet, high blood pressure, diabetes, smoking, advanced age, and genetic mutations in key molecules.

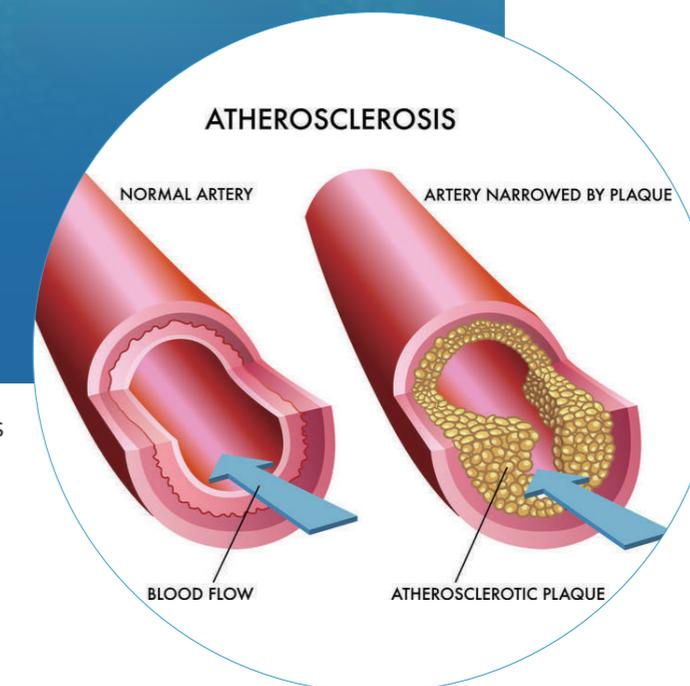


Fig.2 Diagram Showing the Progression of Atherosclerosis

## Atherosclerosis

Targets	Cat.No.	Species
ABCA1(ATP Binding Cassette Transporter A1)	E-EL-H0529	Human
ACE(Angiotensin I Converting Enzyme)	E-EL-H6001/E-EL-M3013/E-EL-R2401	Human/Mouse/Rat
ACE2(Angiotensin I Converting Enzyme 2)	E-EL-H0281/E-EL-R2453	Human/Rat
ADAM8(A Disintegrin And Metalloprotease 8)	E-EL-H0264	Human
ADAM10(A Disintegrin And Metalloprotease 10)	E-EL-H0263	Human
AFGF/FGF1(Acidic Fibroblast Growth Factor 1)	E-EL-H0071	Human
ANG1(Angiopoietin 1)	E-EL-H6119/E-EL-M3014/E-EL-R0626	Human/Mouse/Rat
ANG2(Angiopoietin 2)	E-EL-H0008/E-EL-M0098	Human/Mouse
ANGPTL2(Angiopoietin Like Protein 2)	E-EL-H6034/E-EL-M0092	Human/Mouse
ANGPTL4(Angiopoietin Like Protein 4)	E-EL-H0337/E-EL-M0093	Human/Mouse
ApoA1(Apolipoprotein A1)	E-EL-H0125/E-EL-M3016/E-EL-R3029/E-EL-MK1491	Human/Mouse/Rat/Monkey
ApoB(Apolipoprotein B)	E-EL-H6171/E-EL-M3017/E-EL-R1218	Human/Mouse/Rat
ApoE(Apolipoprotein E)	E-EL-H0470/E-EL-M0135/E-EL-R1230/E-EL-RB1510	Human/Mouse/Rat/Rabbit
bFGF/FGF2(Basic Fibroblast Growth Factor)	E-EL-H6042/E-EL-M0170/E-EL-R0091/E-EL-RB0858	Human/Mouse/Rat/Rabbit
CCL1(Chemokine C-C-Motif Ligand 1)	E-EL-H0699/E-EL-M0263/E-EL-M3065	Human/Mouse
CCL12/MCP-5(Monocyte Chemotactic Protein 5)	E-EL-M3003/E-MSEL-M0011	Mouse
CFD(Complement Factor D)	E-EL-H6007/E-EL-R2432	Human/Rat
COL1α1(Collagen Type I Alpha 1)	E-EL-H0869/E-EL-R0041	Human/Rat
COL3α1(Collagen Type III Alpha 1)	E-EL-H0778	Human

Targets	Cat.No.	Species
COL4(Collagen Type IV )	E-EL-H0178/E-EL-M0317/E-EL-R3009	Human/Mouse/Rat
COX2(Cytochrome C Oxidase Subunit II )	E-EL-H5574	Human
CX43(Connexin 43)	E-EL-H1681	Human
E-Cad(E-Cadherin)	E-EL-H0014/E-EL-M0211/E-EL-R0347	Human/Mouse/Rat
ECF/CCL11(Eosinophil Chemotactic Factor)	E-EL-H0025/E-EL-R0368	Human/Rat
EGF(Epidermal growth factor)	E-EL-H0059/E-EL-M0025/E-EL-R0369	Human/Mouse/Rat
EMMPRIN/CD147(Extracellular Matrix Metalloproteinase Inducer)	E-EL-H6150	Human
EPO(Erythropoietin)	E-EL-H3640/E-EL-M30584/E-EL-R0007/E-EL-MK071	Human/Mouse/Rat/Monkey
ES(Endostatin)	E-EL-H6011	Human
ESM1(Endothelial Cell Specific Molecule 1)	E-EL-H1557/E-EL-R2484	Human/Rat
ET-1(Endothelin 1)	E-EL-H0064/E-EL-M2730/E-EL-R1458	Human/Mouse/Rat
F13A1(Coagulation Factor X III A1 Polypeptide)	E-EL-H0766	Human
FABP4(Fatty Acid Binding Protein 4, Adipocyte)	E-EL-H0285/E-EL-M2404/E-EL-R2436	Human/Mouse/Rat
FN(Fibronectin)	E-EL-H0179/E-EL-M0506/E-EL-R0578	Human/Mouse/Rat
G-CSF(Granulocyte Colony Stimulating Factor)	E-EL-H0079/E-EL-M0031/E-EL-R0454/E-MSEL-M0021	Human/Mouse/Rat
GM-CSF(Granulocyte Macrophage Colony Stimulating Factor)	E-EL-H0081/E-EL-M0032/E-EL-R0008/E-MSEL-M0022	Human/Mouse/Rat
HO1(Heme Oxygenase 1)	E-EL-H2172/E-EL-M3031/E-EL-R0488	Human/Mouse/Rat
IBSP(Bone Sialoprotein 2)	E-EL-H0592	Human
ICAM-1/CD54(Intercellular Adhesion Molecule 1)	E-EL-H6114/E-EL-M3037/E-EL-R2850/E-MSEL-M0020	Human/Mouse/Rat

Targets	Cat.No.	Species
IFN $\alpha$ (Interferon Alpha)	E-EL-H6125/E-EL-M3054/E-EL-R3036	Human/Mouse/Rat
IFN- $\beta$ (Interferon Beta)	E-EL-H0085/E-EL-M0033/E-EL-R0545/E-EL-MK1579	Human/Mouse/Rat/Monkey
IFN- $\gamma$ (Interferon Gamma)	E-EL-H0108/E-EL-M0048/E-EL-R0009/E-EL-RB0679/ E-MSEL-M0007	Human/Mouse/Rat/Rabbit
IGF-1(Insulin-Like Growth Factor 1)	E-EL-H0086/E-EL-M3006/E-EL-R3001/ E-MSEL-M0013/E-OSEL-H0012	Human/Mouse/Rat
IGF1R(Insulin Like Growth Factor 1 Receptor)	E-EL-H0425	Human
IGFBP-1(Insulin Like Growth Factor Binding Protein 1)	E-EL-H0442/E-EL-M0705	Human/Mouse
IL-1 $\beta$ (Interleukin 1 Beta)	E-EL-H0149/E-EL-M0037/E-EL-R0012/E-EL-RB0013/ E-MSEL-M0003	Human/Mouse/Rat/Rabbit
IL-6(Interleukin 6)	E-EL-H6156/E-EL-M0044/E-EL-R0015/E-EL-RB0014/ E-MSEL-M0001/E-OSEL-H0001	Human/Mouse/Rat/Rabbit
IL-8(Interleukin 8)	E-EL-H6008/E-EL-RB1142/E-OSEL-H0014	Human/Rat
IL-12(Interleukin 12)	E-EL-H0150/E-EL-M3062/E-EL-R0064/E-MSEL-M0004	Human/Mouse/Rat
IL-12 p35(Interleukin 12 p35)	E-EL-H1647/E-EL-M2450	Human/Mouse
IL-12 p40(Interleukin 12 p40)	E-EL-H0151/E-EL-M2451/E-MSEL-M0041	Human/Mouse
LTA4H(Leukotriene A4 Hydrolase)	E-EL-H1403	Human
LTB4(Leukotriene B4)	E-EL-0061	Universal
MIF(Macrophage Migration Inhibitory Factor)	E-EL-H6170/E-EL-M0771	Human/Mouse
MMP-1(Matrix Metalloproteinase 1)	E-EL-H6073/E-EL-M0779/E-EL-R0617/E-EL-RB0349	Human/Mouse/Rat/Rabbit
MMP-2(Matrix Metalloproteinase 2)	E-EL-H1445/E-EL-M0780/E-EL-R0618	Human/Mouse/Rat

Targets	Cat.No.	Species
MMP-9(Matrix Metalloproteinase 9)	E-EL-H6075/E-EL-M3052/E-EL-R3021	Human/Mouse/Rat
NOS2/iNOS(Nitric Oxide Synthase 2, Inducible)	E-EL-H0753/E-EL-M0696/E-EL-R0520	Human/Mouse/Rat
NOS3/eNOS(Nitric Oxide Synthase 3, Endothelial)	E-EL-H0755/E-EL-M0456/E-EL-R0367	Human/Mouse/Rat
Ntn1(Netrin 1)	E-EL-H2328	Human
PAI1(Plasminogen Activator Inhibitor 1)	E-EL-H2104/E-EL-M3041/E-EL-R3025	Human/Mouse/Rat
PDGF-AB(Platelet Derived Growth Factor AB)	E-EL-H1576	Human
PDGF-BB(Platelet Derived Growth Factor-BB)	E-EL-H1577/E-EL-M0632	Human/Mouse
PECAM1/CD31(Platelet/Endothelial Cell Adhesion Molecule 1)	E-EL-H1640	Human
SAA(Serum Amyloid A)	E-EL-H2183/E-EL-M3045/E-EL-R3026	Human/Mouse/Rat
sCD40L(Soluble Cluster of Differentiation 40 Ligand)	E-EL-H0035	Human
TGF- $\beta$ 1(Transforming Growth Factor $\beta$ 1)	E-EL-0162	Universal
TGF- $\beta$ 2(Transforming Growth Factor $\beta$ 2)	E-EL-H1587/E-EL-M1191/E-EL-R1015	Human/Mouse/Rat
TLR4(Toll-Like Receptor 4)	E-EL-H6123/E-EL-M2417/E-EL-R0990	Human/Mouse/Rat
TM(Thrombomodulin)	E-EL-H0166/E-EL-MK1229	Human/Monkey
TNF- $\alpha$ (Tumor Necrosis Factor Alpha)	E-EL-H0109/E-EL-M3063/E-EL-R2856/E-EL-RB0011/ E-EL-P0010/E-MSEL-M0002	Human/Mouse/Rat/Rabbit/ Porcine
VAP-1(Vascular Adhesion Protein 1)	E-EL-M0410/E-EL-R1209	Mouse/Rat
VCAM-1/CD106(Vascular Cell Adhesion Molecule 1)	E-EL-H5587/E-EL-M1233/E-EL-R1061	Human/Mouse/Rat
VEGF-A(Vascular Endothelial Cell Growth Factor A)	E-EL-H0111/E-EL-M1292/E-EL-R2603/E-MSEL-M0005	Human/Mouse/Rat
VEGFR1/FLT1(Vascular Endothelial Growth Factor Receptor 1)	E-EL-H6175/E-EL-M0648/E-EL-R0911	Human/Mouse/Rat

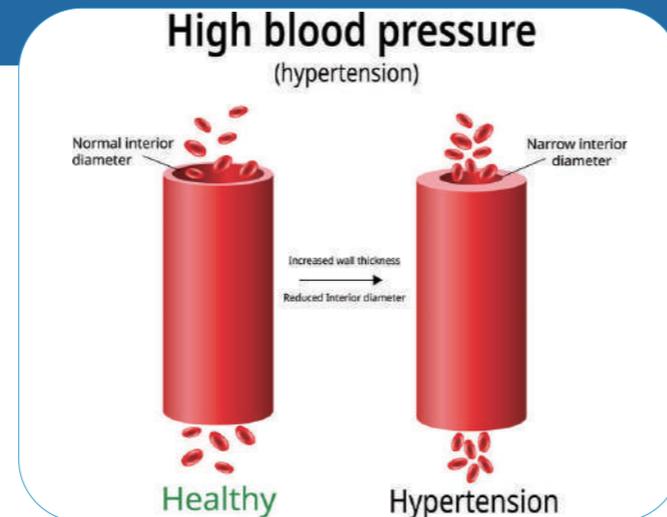
### 03 Blood Pressure Regulation

Blood Pressure (BP) is the pressure of circulating blood against the walls of blood vessels. It is the power that pushes blood to flow through blood vessels. In different blood vessels are called arterial blood pressure, capillary blood pressure and venous blood pressure respectively, usually referred to as blood pressure refers to the arterial blood pressure of the systemic circulation.

Blood Pressure is influenced by cardiac output, systemic vascular resistance and arterial stiffness and varies depending on situation, emotional state, activity, and relative health/disease states. In the short term, blood pressure is regulated by baroreceptors which act via the brain to influence the nervous and the endocrine systems. Keeping blood pressure relatively constant and adjusting blood flow according to the needs of tissues and organs on these basis are the two necessary conditions for the cardiovascular system to protect the organs and tissues from adequate blood supply.

Improper regulation of blood pressure can cause hypertension or hypotension. Persistent hypertension is one of the risk factors for strokes, heart attacks, heart failure, and arterial aneurysms, and is the leading cause of chronic kidney failure. Blood pressure that is too low is known as hypotension. This is a medical concern if it causes signs or symptoms, such as dizziness, fainting, or in extreme cases, circulatory shock.

Fig.3 Diagram Showing the Vascular Structure Changes in Hypertension



### Blood Pressure Regulation

Targets	Cat.No.	Species
ACTH(Adrenocorticotropic Hormone)	E-EL-H0137/E-EL-M0079/E-EL-R0048	Human/Mouse/Rat
AFGF/FGF1(Acidic Fibroblast Growth Factor 1)	E-EL-H0071	Human
AGER(Total Advanced Glycosylation End Product Specific Receptor)	E-EL-H0295/E-EL-M3018/E-EL-R0643/E-MSEL-M0019	Human/Mouse/Rat
ALB(Albumin)	E-EL-H6105/E-EL-M3032/E-EL-R0362	Human/Mouse/Rat
ApoC2(Apolipoprotein C2)	E-EL-H0466	Human
ApoE(Apolipoprotein E)	E-EL-H0470/E-EL-M0135/E-EL-R1230/E-EL-RB1510	Human/Mouse/Rat/Rabbit
C3a(Complement Component 3a)	E-EL-H0818/E-EL-M0337/E-EL-R0255/E-EL-MK1914	Human/Mouse/Rat/Monkey
C3d(Complement Fragment 3d)	E-EL-H5457	Human
Cortisol	E-OSEL-H0006/E-OSEL-B0002/E-OSEL-C0002/ E-OSEL-MK0002/E-OSEL-P0002/E-OSEL-RB0002/ E-OSEL-S0002	Human/Bovine/Canine/ Monkey/Porcine/Rabbit/ Sheep
DA(Dopamine)	E-EL-0046	Universal
FABP1(Fatty Acid Binding Protein 1, Liver)	E-EL-H6153/E-EL-M3050/E-EL-R3033	Human/Mouse/Rat
FGF19(Fibroblast Growth Factor 19)	E-EL-R2409/E-EL-MK2213	Rat/Monkey
FGF21(Fibroblast Growth Factor 21)	E-EL-H0074/E-EL-M0029/E-EL-RB0160/E-EL-MK1541	Human/Mouse/Rat/Monkey
GLP-1(Glucagon Like Peptide 1)	E-EL-H6025/E-EL-M3012/E-EL-R3007	Human/Mouse/Rat
IGF-1(Insulin-Like Growth Factor 1)	E-EL-H0086/E-EL-M3006/E-EL-R3001/E-MSEL-M0013/ E-OSEL-H0012	Human/Mouse/Rat
IGFBP-1(Insulin Like Growth Factor Binding Protein 1)	E-EL-H0442/E-EL-M0705	Human/Mouse
IGFBP-2(Insulin-Like Growth Factor Binding Protein 2)	E-EL-H6038	Human

Targets	Cat.No.	Species
IGFBP-3(Insulin-like Growth Factor Binding Protein 3)	E-EL-H0087/E-EL-M3007/E-EL-R3017	Human/Mouse/Rat
IL-6(Interleukin 6)	E-EL-H6156/E-EL-M0044/E-EL-R0015/E-EL-RB0014/ E-MSEL-M0001/E-OSEL-H0001	Human/Mouse/Rat/Rabbit
IL-8(Interleukin 8)	E-EL-H6008/E-EL-RB1142/E-OSEL-H0014	Human/Rabbit
I-PTH(intact Parathormone)	E-EL-H6076/E-EL-M0709/E-EL-R0535/E-EL-MK0697	Human/Mouse/Rat/Monkey
KL(Klotho)	E-EL-H5451/E-EL-M3051/E-EL-R2580	Human/Mouse/Rat
LEP(Leptin)	E-EL-H6017/E-EL-M3008/E-EL-R0582/E-MSEL-M0033	Human/Mouse/Rat
LEPR(Leptin Receptor)	E-EL-H6016/E-EL-M3040/E-EL-R1095/E-MSEL-M0034	Human/Mouse/Rat
LpPLA2(Lipoprotein-associated Phospholipase A2)	E-EL-H2286/E-EL-R0592	Human/Rat
NPY(Neuropeptide Y)	E-EL-H1893/E-EL-M0820/E-EL-R0655	Human/Mouse/Rat
PCSK9(Proprotein Convertase Subtilisin/Kexin Type 9)	E-EL-H6182/E-EL-M0634/E-EL-R2487	Human/Mouse/Rat
PGE2(Prostaglandin E2)	E-EL-0034	Universal
PTHRP(Parathyroid Hormone Related Protein)	E-EL-H1478/E-EL-R0716	Human/Rat
PYY(Peptide YY)	E-EL-H1237/E-EL-M2375/E-EL-R0720	Human/Mouse/Rat
RBP4(Retinol Binding Protein 4, Plasma)	E-EL-H1581/E-EL-M3043/E-EL-R0852	Human/Mouse/Rat
RETN(Resistin)	E-EL-H1213/E-EL-M3056/E-EL-R0614/E-MSEL-M0010	Human/Mouse/Rat
ST/5-HT(Serotonin/5-Hydroxytryptamine)	E-EL-0033	Universal
TNC(Tenascin C)	E-EL-M3047	Mouse
TXB2(Thromboxane B2)	E-EL-H2191/E-EL-M1144	Human/Mouse
VEGF-A(Vascular Endothelial Cell Growth Factor A)	E-EL-H0111/E-EL-M1292/E-EL-R2603/E-MSEL-M0005	Human/Mouse/Rat
VF(Visfatin)	E-EL-H1763/E-EL-M1237/E-EL-R1067	Human/Mouse/Rat

## 04 Coagulation

Coagulation refers to the process of blood changing from liquid to gel to form clots, which is an important link of hemostasis. The mechanism of coagulation involves activation, adhesion and aggregation of platelets, as well as deposition and maturation of fibrin.

When the vascular endothelium is damaged, blood exposure to the inner subcutaneous space triggers both primary and secondary hemostasis. Primary hemostasis refers to changes in platelets after injury. Exposure of endo-subcutaneous tissue factors to plasma factor VIII leads to the formation of cross-linked fibrin, and platelets immediately form embolism at the injured site. Secondary hemostasis occurs when factors other than plasma factor VIII cascade together to form fibrin chains that reinforce platelet embolism.

Coagulation disorder is a disease condition that can lead to bleeding, bruising or thrombosis, which is an important factor in the pathogenesis of atherosclerosis (AS) and coronary heart disease (CHD).

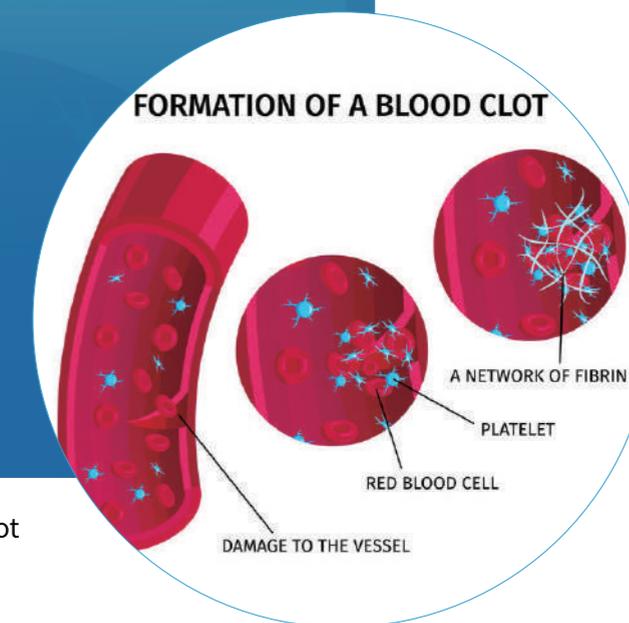


Fig.4 Diagram Showing the Formation of a Blood Clot

## Coagulation

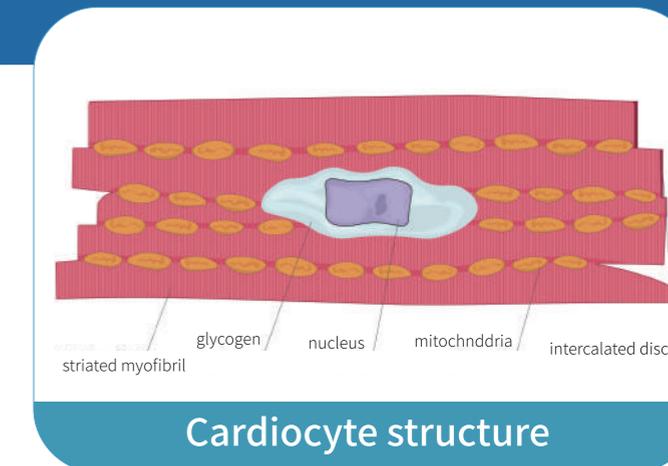
Targets	Cat.No.	Species
ANXA2(Annexin A2)	E-EL-H0448	Human
ANXA5(Annexin A5)	E-EL-H0422	Human
F3/TF(Tissue Factor)	E-EL-H0040/E-EL-M1163/E-EL-R0984/E-EL-RB0375	Human/Mouse/Rat/Rabbit
F5(Coagulation Factor V)	E-EL-H0764/E-EL-R0230	Human/Rat
F7(Coagulation Factor VII )	E-EL-H0758/E-EL-M2644/E-EL-R2376	Human/Mouse/Rat
F8(Coagulation Factor VIII )	E-EL-H6116/E-EL-M0307	Human/Mouse
F9(Coagulation Factor IX )	E-EL-H0760/E-EL-M0308/E-EL-R0229	Human/Mouse/Rat
F10(coagulation factor X)	E-EL-H0761/E-EL-R0226	Human/Rat
F11(Coagulation Factor XI )	E-EL-MK1741	Monkey
F12(Coagulation Factor XII )	E-EL-M0310/E-EL-R0228	Mouse/Rat
F13A1(Coagulation Factor X III A1 Polypeptide)	E-EL-H0766	Human
FGL2(Fibrinogen Like Protein 2)	E-EL-H2112	Human
FGα(Fibrinogen Alpha)	E-CL-H1265/E-CL-M0298	Human/Mouse
PAI1(Plasminogen Activator Inhibitor 1)	E-EL-H2104/E-EL-M3041/E-EL-R3025	Human/Mouse/Rat
PF4(Platelet Factor 4)	E-EL-H6184/E-EL-M3042/E-EL-M3080/E-EL-R0759	Human/Mouse/Rat
TAFI(Thrombin Activatable Fibrinolysis Inhibitor)	E-EL-H2107	Human
TFPI(Tissue Factor Pathway Inhibitor)	E-EL-H6163	Human
TM(Thrombomodulin)	E-EL-H0166/E-EL-MK1229	Human/Monkey
tPA(Tissue-type Plasminogen Activator)	E-EL-H2106/E-EL-M0917/E-EL-RB0523	Human/Mouse/Rat
TXB2(Thromboxane B2)	E-EL-H2191/E-EL-M1144	Human/Mouse

## 05 Cardiovascular Markers

Cardiac stem cells are thought to be a quiescent, heart-resident population that can reenter the cell cycle following injuries such as acute myocardial infarction. Cardiac stem cells isolated from the myocardium have self-renewal capabilities in vitro and the ability to differentiate in vivo into all three major cardiac cell types: cardiomyocytes, vascular smooth muscle cells, and endothelial cells. These cells play key roles in circulation, maintenance and support of cardiovascular activity, perfusion, and phylogeny. Analysis and identification of abnormal cardiac cell function and cardiac stem cell biomarkers are very important for screening, differential diagnosis, risk stratification, treatment and prognosis and follow-up evaluation of cardiovascular diseases.

In recent years, more than 300 markers of cardiovascular diseases have been discovered. At present, according to the main categories of cardiovascular pathology, clinical biomarkers of cardiovascular disease can be roughly divided into 11 categories: myocardial injury, cardiac load, myocardial fibrosis, inflammatory mediators, neuroendocrine hormones, myocardial remodeling, renal function injury, blood lipid, coagulation and fibrinolytic activity related biomarkers.

Fig.5 Diagram Showing the Structure of Cardiocyte



Cardiocyte structure

## Cardiovascular Markers

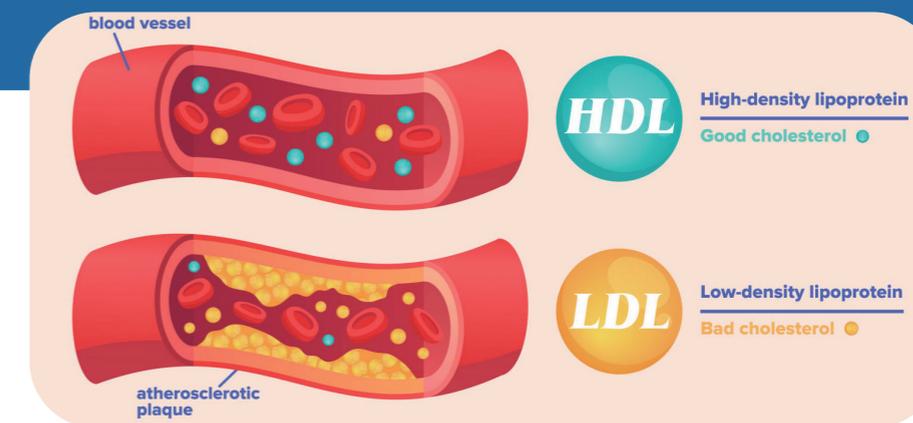
Targets	Cat.No.	Species
ACE(Angiotensin I Converting Enzyme)	E-EL-H6001/E-EL-M3013/E-EL-R2401	Human/Mouse/Rat
ACTα2(Actin Alpha 2, Smooth Muscle)	E-EL-H0979/E-EL-M2434/E-EL-R2425	Human/Mouse/Rat
BMP-2(Bone Morphogenetic Protein 2)	E-EL-H0011/E-EL-M0193/E-EL-R0002	Human/Mouse/Rat
BMP-4(Bone Morphogenetic Protein 4)	E-EL-H0012	Human
CNN1(Calponin 1, Basic, Smooth Muscle)	E-EL-H0346	Human
cTnT/TNNT2(Troponin T Type 2, Cardiac)	E-EL-H0646/E-EL-M1801/E-EL-R0151	Human/Mouse/Rat
ENG(Endoglin)	E-EL-H6010/E-EL-M1072/E-EL-R2434/E-MSEL-M0028	Human/Mouse/Rat
FABP3(Fatty Acid Binding Protein 3, Muscle and Heart)	E-EL-H1431/E-EL-R0871	Human/Mouse/Rat
IGF-1(Insulin-Like Growth Factor 1)	E-EL-H0086/E-EL-M3006/E-EL-R3001/E-MSEL-M0013	Human/Mouse/Rat
IGF1R(Insulin Like Growth Factor 1 Receptor)	E-EL-H0425	Human
IGF-2(Insulin Like Growth Factor 2)	E-EL-H6037/E-EL-R0530	Human/Rat
IGF2R(Insulin Like Growth Factor 2 Receptor)	E-EL-H0440	Human
LpPLA2(Lipoprotein-associated Phospholipase A2)	E-EL-H2286/E-EL-R0592	Human/Rat
PECAM1/CD31(Platelet/Endothelial Cell Adhesion Molecule 1)	E-EL-H1640	Human
SELE(E-Selectin)	E-EL-H0876/E-EL-M3027/E-EL-R0893/E-MSEL-M0014	Human/Mouse/Rat
TM(Thrombomodulin)	E-EL-H0166/E-EL-MK1229	Human/Monkey
TNNI3/cTn-I(Troponin I Type 3, Cardiac)	E-EL-H0649/E-EL-M1203/E-EL-R1253	Human/Mouse/Rat
VE-Cadherin(Vascular Endothelial Cadherin)	E-EL-H6103/E-EL-M0210/E-EL-R0130	Human/Mouse/Rat
VEGFR-2/KDR(Vascular Endothelial Growth Factor Receptor 2)	E-EL-H1603/E-EL-M0649	Human/Mouse

## 06 Lipid/Cholesterol Metabolism

Cholesterol is a sterol molecule and an essential structural component of animal cell membranes (approximately 30%), which is essential for maintaining membranes, regulating membrane fluidity, and establishing membrane permeability. Cholesterol is also a precursor to anabolic steroids, bile acids and vitamin D. Various hormones released by the adrenal cortex and gonadal glands of the human body, such as cortisol, aldosterone, testosterone, estradiol are steroid hormones.

Cholesterol is produced throughout the body and absorbed from the diet, with the liver, bones and spinal cord having the highest levels. Since cholesterol is insoluble in the blood, it is transported throughout the body via low-density lipoprotein (LDL) and high-density lipoprotein (HDL). Once inside the cell, cholesterol is transported via fatty acid binding proteins (FABPs). HDL acts as a scavenger by removing cholesterol from the walls of blood vessels and transporting it to the liver. Low density lipoprotein cholesterol (LDL-C) is a key causative factor in atherosclerosis and cardiovascular diseases, and is also a prime target for lipid-lowering intervention.

Fig.6 Diagram Showing the Types of Cholesterol



## Lipid/Cholesterol Metabolism

Targets	Cat.No.	Species
ABCA1(ATP Binding Cassette Transporter A1)	E-EL-H0529	Human
ADP/Acrp30(Adiponectin)	E-EL-H6122/E-EL-M0002/E-EL-R3012/E-OSEL-R0006	Human/Mouse/Rat
ANGPTL2(Angiopietin Like Protein 2)	E-EL-H6034/E-EL-M0092	Human/Mouse
ApoA1(Apolipoprotein A1)	E-EL-H0125/E-EL-M3016/E-EL-R3029/E-EL-MK1491	Human/Mouse/Rat/Monkey
ApoA2(Apolipoprotein A2)	E-EL-H6039/E-EL-M2733	Human/Mouse
ApoA4(Apolipoprotein A4)	E-EL-H0463	Human
ApoB(Apolipoprotein B)	E-EL-M3017/E-EL-R1218	Human/Rat
ApoB100(Apolipoprotein B100)	E-EL-H0476/E-EL-M0138	Human/Mouse
ApoC2(Apolipoprotein C2)	E-EL-H0466	Human
ApoE(Apolipoprotein E)	E-EL-H0470/E-EL-M0135/E-EL-R1230/E-EL-RB1510	Human/Mouse/Rat/Rabbit
C1QTNF3(C1q and Tumor Necrosis Factor Related Protein 3)	E-EL-H5523	Human
Cav-1(Caveolin-1)	E-EL-H0673	Human
CFD(Complement Factor D)	E-EL-H6007/E-EL-R2432	Human/Rat
FABP1(Fatty Acid Binding Protein 1, Liver)	E-EL-H6153/E-EL-M3050/E-EL-R3033	Human/Mouse/Rat
FABP3(Fatty Acid Binding Protein 3, Muscle and Heart)	E-EL-H1431/E-EL-R0871	Human/Rat
FABP4(Fatty Acid Binding Protein 4, Adipocyte)	E-EL-H0285/E-EL-M2404/E-EL-R2436	Human/Mouse/Rat
FABP5(Fatty Acid Binding Protein 5, Epidermal)	E-EL-H1086/E-EL-M0487	Human/Mouse
FABP6(Fatty Acid Binding Protein 6, Ileal)	E-EL-H1417	Human

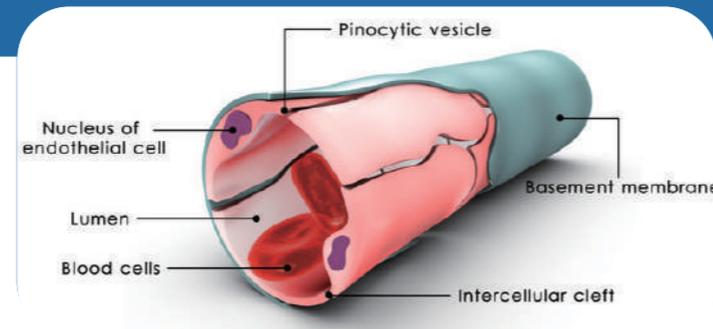
Targets	Cat.No.	Species
FASN(Fatty Acid Synthase)	E-EL-H0375	Human
IGF-1(Insulin-Like Growth Factor 1)	E-EL-H0086/E-EL-M3006/E-EL-R3001/ E-MSEL-M0013/E-OSEL-H0012	Human/Mouse/Rat
IGF1R(Insulin Like Growth Factor 1 Receptor)	E-EL-H0425	Human
IL-6(Interleukin 6)	E-EL-H6156/E-EL-M0044/E-EL-R0015/E-EL-RB0014/ E-MSEL-M0001/E-OSEL-H0001	Human/Mouse/Rat/Rabbit
INS(Insulin)	E-EL-H2665/E-EL-M1382/E-EL-M2614/E-EL-R2466/ E-EL-R3034/E-EL-RB2274/E-EL-MK2283	Human/Mouse/Rat/Rabbit/ Monkey
INSR(Insulin Receptor)	E-EL-H0452	Human
LDLR(Low Density Lipoprotein Receptor)	E-EL-H1211/E-EL-M0903	Human/Mouse
LEP(Leptin)	E-EL-H6017/E-EL-M3008/E-EL-R0582/E-MSEL-M0033	Human/Mouse/Rat
LEPR(Leptin Receptor)	E-EL-H6016/E-EL-M3040/E-EL-R1095/E-MSEL-M0034	Human/Mouse/Rat
OxLDL(Oxidized Low Density Lipoprotein)	E-EL-H6021/E-EL-M0066/E-EL-R0710	Human/Mouse/Rat
PCSK9(Proprotein Convertase Subtilisin/Kexin Type 9)	E-EL-H6182/E-EL-M0634/E-EL-R2487	Human/Mouse/Rat
RBP4(Retinol Binding Protein 4, Plasma)	E-EL-H1581/E-EL-M3043/E-EL-R0852	Human/Mouse/Rat
RETN(Resistin)	E-EL-H1213/E-EL-M3056/E-EL-R0614/E-MSEL-M0010	Human/Mouse/Rat
SAA(Serum Amyloid A)	E-EL-H2183/E-EL-M3045/E-EL-R3026	Human/Mouse/Rat
SAA2(Serum Amyloid A2)	E-EL-H6112	Human
SAA4(Serum Amyloid A4)	E-EL-H5638	Human
TNF- $\alpha$ (Tumor Necrosis Factor Alpha)	E-EL-H0109/E-EL-M3063/E-EL-R2856/E-EL-RB0011/ E-EL-P0010/E-MSEL-M0002	Human/Mouse/Rat/Rabbit/ Porcine
VF(Visfatin)	E-EL-H1763/E-EL-M1237/E-EL-R1067	Human/Mouse/Rat

The vascular endothelium is comprised of monolayer of endothelial cells (EC) that line blood vessels and lymphatic vessels. Endothelial cells form a barrier between blood vessels and tissues and mediate the uptake of circulating nutrients, responding to endocrine hormones, angiogenic factors and neurotransmitters.

Endothelial cells are involved in many aspects of blood vessel function, including:

- Blood clotting (thrombosis and fibrinolysis).** Endothelial cells contain and express substances that block clotting, including heparan sulfate, which acts as a co-factor in activating antithrombin, a protease that inactivates several factors in the clotting cascade.
- Inflammation and swelling.** Endothelial cells actively signal the white blood cells of the immune system during inflammation.
- Angiogenesis.** The process of angiogenesis is regulated by pro-angiogenic and anti-angiogenic signals, activating signal molecules that bind to surface receptors of vascular endothelial cells to activate endothelial cells to release proteases, leading to basement membrane degradation. Endothelial cells then dissociate from the existing blood vessels and begin to proliferate, forming an extension to the source of angiogenic stimulus.
- Blood vessels constrict and dilate to control blood pressure.**
- Atherosclerosis and heart disease.** The vascular endothelium becomes dysfunctional following injury or in chronic inflammatory diseases such as atherosclerosis, diabetes, and cancer. In these settings, EC exhibit dysregulated transendothelial permeability, production of vasorelaxant factors, and intracellular signalin.

Fig.7 Diagram Showing the Location of Endothelial Cells



## Vascular Endothelium

Targets	Cat.No.	Species
ACE(Angiotensin I Converting Enzyme)	E-EL-H6001/E-EL-M3013/E-EL-R2401	Human/Mouse/Rat
AQP-1(Aquaporin 1)	E-EL-H0487	Human
AQP-4(Aquaporin 4)	E-EL-H0490/E-EL-R0067	Human/Rat
bFGF/FGF2(Basic Fibroblast Growth Factor)	E-EL-H6042/E-EL-M0170/E-EL-R0091/E-EL-RB0858	Human/Mouse/Rat/Rabbit
BMP-2(Bone Morphogenetic Protein 2)	E-EL-H0011/E-EL-M0193/E-EL-R0002	Human/Mouse/Rat
BMP-4(Bone Morphogenetic Protein 4)	E-EL-H0012	Human
COX2(Cytochrome C Oxidase Subunit II )	E-EL-H5574	Human
CX43(Connexin 43)	E-EL-H1681	Human
E-Cad(E-Cadherin)	E-EL-H0014/E-EL-M0211/E-EL-R0347	Human/Mouse/Rat
ET-1(Endothelin 1)	E-EL-H0064/E-EL-M2730/E-EL-R1458	Human/Mouse/Rat
F3/TF(Tissue Factor)	E-EL-H0040/E-EL-M1163/E-EL-R0984/E-EL-RB0375	Human/Mouse/Rat/Rabbit
FGFR1(Fibroblast Growth Factor Receptor 1)	E-EL-H0345	Human
FN(Fibronectin)	E-EL-H0179/E-EL-M0506/E-EL-R0578	Human/Mouse/Rat
GAL1(Galectin 1)	E-EL-H1051/E-EL-R3043	Human/Rat
GAL3(Galectin 3)	E-EL-H1470/E-EL-M0529/E-EL-R0399	Human/Mouse/Rat
GPC1(Glypican 1)	E-EL-H1710	Human
GPC3(Glypican 3)	E-EL-H1712/E-EL-M0328	Human/Mouse
GPC4(Glypican 4)	E-EL-H1713	Human
HGF(Hepatocyte Growth Factor)	E-EL-H0084/E-EL-M3033/E-EL-R0496/E-MSEL-M0015	Human/Mouse/Rat
ICAM-1/CD54(Intercellular Adhesion Molecule 1)	E-EL-H6114/E-EL-M3037/E-EL-R2850/E-MSEL-M0020	Human/Mouse/Rat

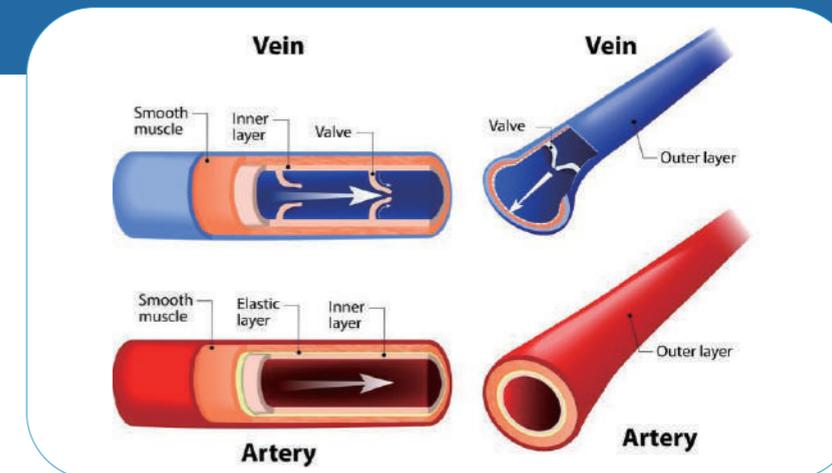
Targets	Cat.No.	Species
IL-6R(Interleukin 6 Receptor)	E-EL-H0192/E-EL-R0896	Human/Rat
LOX-1(Lectin Like Oxidized Low Density Lipoprotein Receptor 1)	E-EL-H1635	Human
LTA4H(Leukotriene A4 Hydrolase)	E-EL-H1403	Human
Notch 2(Notch Homolog 2)	E-EL-R3040	Rat
PAI1(Plasminogen Activator Inhibitor 1)	E-EL-H2104/E-EL-M3041/E-EL-R3025	Human/Mouse/Rat
PECAM1/CD31(Platelet/Endothelial Cell Adhesion Molecule 1)	E-EL-H1640	Human
sCD40L(Soluble Cluster of Differentiation 40 Ligand)	E-EL-H0035	Human
SELE(E-Selectin)	E-EL-H0876/E-EL-M3027/E-EL-R0893/E-MSEL-M0014	Human/Mouse/Rat
SELP(P-Selectin)	E-EL-M0638/E-EL-R3045/E-MSEL-M0029	Mouse/Rat
TFPI(Tissue Factor Pathway Inhibitor)	E-EL-H6163	Human
TLR-2(Toll-like Receptor 2)	E-EL-H0951/E-EL-R0907	Human/Rat
TLR4(Toll-Like Receptor 4)	E-EL-H6123/E-EL-M2417/E-EL-R0990	Human/Mouse/Rat
TLR9(Toll-Like Receptor 9)	E-EL-H0952/E-EL-R0991	Human/Rat
tPA(Tissue-type Plasminogen Activator)	E-EL-H2106/E-EL-M0917/E-EL-RB0523	Human/Mouse/Rat
TXB2(Thromboxane B2)	E-EL-H2191/E-EL-M1144	Human/Mouse
VCAM-1/CD106(Vascular Cell Adhesion Molecule 1)	E-EL-H5587/E-EL-M1233/E-EL-R1061	Human/Mouse/Rat
VE-Cadherin(Vascular Endothelial Cadherin)	E-EL-H6103/E-EL-M0210/E-EL-R0130	Human/Mouse/Rat
VEGFR1/FLT1(Vascular Endothelial Growth Factor Receptor 1)	E-EL-H6175/E-EL-M0648/E-EL-R0911	Human/Mouse/Rat
VEGFR-2/KDR(Vascular Endothelial Growth Factor Receptor 2)	E-EL-H1603/E-EL-M0649	Human/Mouse

## 08 Vascular Smooth Muscle

Vascular smooth muscle refers to the specific type of smooth muscle that exists in the wall of blood vessels and makes up the main part of it. Vascular smooth muscle is primarily innervated by the sympathetic nervous system through adrenergic receptors. There are three types of adrenergic receptors found in vascular smooth muscle:  $\alpha_1$ ,  $\alpha_2$ , and  $\beta_2$ . The primary endogenous agonist for these cell receptors is norepinephrine (NE). Agonists of  $\alpha_1$  and  $\alpha_2$  receptors in the vascular smooth muscle lead to vasoconstriction, but agonism of  $\beta_2$  receptors causes vasodilation and low blood pressure.

Excessive proliferation of vascular smooth muscle cells contributes to the progression of pathological conditions, such as vascular inflammation, plaque formation, atherosclerosis, restenosis, and pulmonary hypertension. Recent studies have shown that the majority of cells within atherosclerotic plaque, the predominant cause of heart attack and stroke, are vascular smooth muscle cell derived.

Fig.8 Diagram Showing the Structure of Artery and Vein



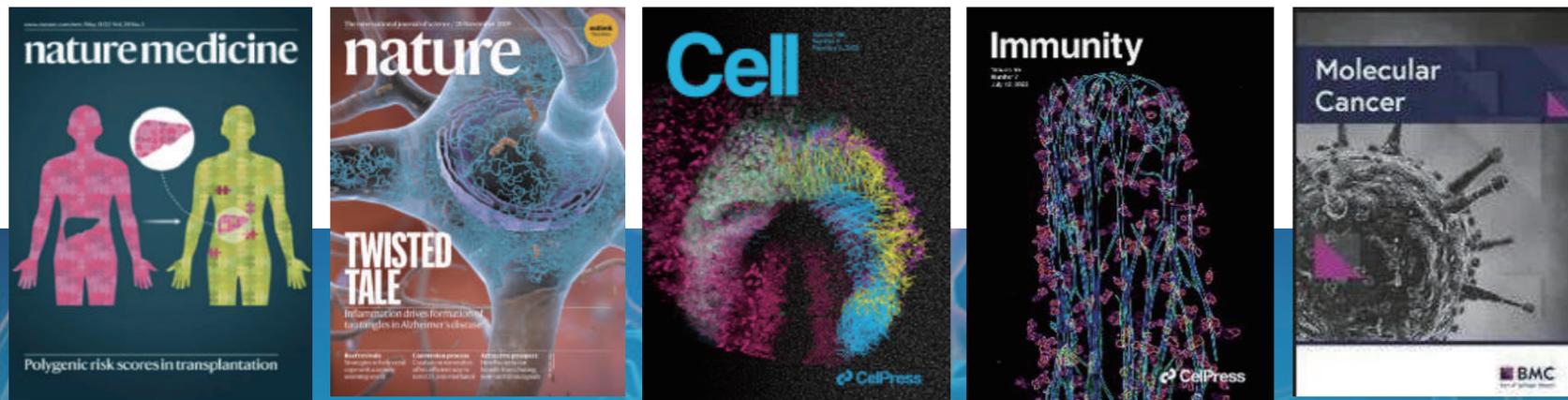
## Vascular Smooth Muscle

Targets	Cat.No.	Species
ABCA1(ATP Binding Cassette Transporter A1)	E-EL-H0529	Human
ADAM10(A Disintegrin And Metalloprotease 10)	E-EL-H0263	Human
AGER(Total Advanced Glycosylation End Product Specific Receptor)	E-EL-H0295/E-EL-M3018/E-EL-R0643/E-MSEL-M0019	Human/Mouse/Rat
Cav-1(Caveolin-1)	E-EL-H0673	Human
EGFR(Epidermal Growth Factor Receptor)	E-EL-H0060/E-EL-M3068	Human/Mouse
FAK(Focal Adhesion Kinase)	E-EL-H1771	Human
FAS/CD95(Factor Related Apoptosis)	E-EL-H0067/E-EL-R0373	Human/Rat
FOXO3(Forkhead Box Protein O3)	E-EL-H1101	Human
GLUT1(Glucose Transporter 1)	E-EL-H1822	Human
HIF-1 $\alpha$ (Hypoxia Inducible Factor 1 Alpha)	E-EL-H6066/E-EL-M0687/E-EL-R0513	Human/Mouse/Rat
HIF-2 $\alpha$ (Hypoxia Inducible Factor 2 Alpha)	E-EL-H2468/E-EL-M0786	Human/Mouse
IFN- $\gamma$ (Interferon Gamma)	E-EL-H0108/E-EL-M0048/E-EL-R0009/E-EL-RB0679/ E-MSEL-M0007	Human/Mouse/Rat/Rabbit
IGF1R(Insulin Like Growth Factor 1 Receptor)	E-EL-H0425	Human
IGF2R(Insulin Like Growth Factor 2 Receptor)	E-EL-H0440	Human
IGFBP-3(Insulin-like Growth Factor Binding Protein 3)	E-EL-H0087/E-EL-M3007/E-EL-R3017	Human/Mouse/Rat
IL-6(Interleukin 6)	E-EL-H6156/E-EL-M0044/E-EL-R0015/E-EL-RB0014/ E-MSEL-M0001/E-OSEL-H0001	Human/Mouse/Rat/Rabbit
IL-10(Interleukin 10)	E-EL-H6154/E-EL-M0046/E-EL-R0016/E-EL-RB0487/ E-MSEL-M0031	Human/Mouse/Rat/Rabbit
IL-18(Interleukin 18)	E-EL-H0253/E-EL-M0730/E-EL-R0567	Human/Mouse/Rat

Targets	Cat.No.	Species
INSR(Insulin Receptor)	E-EL-H0452	Human
IP-10/CXCL10(Interferon Gamma Induced Protein 10kDa)	E-EL-H0050/E-EL-M0021/E-EL-R0546	Human/Mouse/Rat
ITGB3(Integrin Beta 3)	E-EL-H2203	Human
LDLR(Low Density Lipoprotein Receptor)	E-EL-H1211/E-EL-M0903	Human/Mouse
LEPR(Leptin Receptor)	E-EL-H6016/E-EL-M3040/E-EL-R1095/E-MSEL-M0034	Human/Mouse/Rat
LpPLA2(Lipoprotein-associated Phospholipase A2)	E-EL-H2286/E-EL-R0592	Human/Rat
MCP-1(Monocyte Chemotactic Protein 1)	E-EL-H6005/E-EL-M3001/E-EL-R0633/E-MSEL-M0012	Human/Mouse/Rat
MMP-1(Matrix Metalloproteinase 1)	E-EL-H6073/E-EL-M0779/E-EL-R0617/E-EL-RB0349	Human/Mouse/Rat/Rabbit
MMP-9(Matrix Metalloproteinase 9)	E-EL-H6075/E-EL-M3052/E-EL-R3021	Human/Mouse/Rat
NOS1/nNOS(Nitric Oxide Synthase 1, Neuronal)	E-EL-H0742/E-EL-R1438	Human/Rat
NOS2/iNOS(Nitric Oxide Synthase 2, Inducible)	E-EL-H0753/E-EL-M0696/E-EL-R0520	Human/Mouse/Rat
NOS3/eNOS(Nitric Oxide Synthase 3, Endothelial)	E-EL-H0755/E-EL-M0456/E-EL-R0367	Human/Mouse/Rat
NRP1(Neuropilin 1)	E-EL-H6164/E-EL-R3041	Human/Rat
ON(Osteonectin)	E-EL-H1351/E-EL-M0867	Human/Mouse
OPN(Osteopontin)	E-EL-H1347/E-EL-M3030/E-EL-R0702	Human/Mouse/Rat
PAI1(Plasminogen Activator Inhibitor 1)	E-EL-H2104/E-EL-M3041/E-EL-R3025	Human/Mouse/Rat
PECAM1/CD31(Platelet/Endothelial Cell Adhesion Molecule 1)	E-EL-H1640	Human
PGE2(Prostaglandin E2)	E-EL-0034	Universal
SOST(Sclerostin)	E-EL-H1544/E-EL-R3032	Human/Rat
ST/5-HT(Serotonin/5-Hydroxytryptamine)	E-EL-0033	Universal

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## Part of High IF Publications—Cardiovascular Research Area

Target	Cat.No.	Literature Information	Research Area	Impact Factor
Mouse ADH	E-EL-M0106	Bi Q Q, Wang C, Cheng G, et al. Microglia-Derived PDGFB Promotes Neuronal Potassium Currents to Suppress Basal Sympathetic Tonicity and Limit Hypertension[J]. <i>Immunity</i> , 2022, 55(8-9): 1334-1336.	Cardiovascular Neuroscience Signaling Transduction	43.474
Mouse TNNI3/cTn-I	E-EL-M1203	Yuan Y, Mei Z, Qu Z, et al. Exosomes Secreted from Cardiomyocytes Suppress the Sensitivity of Tumor Ferroptosis in Ischemic Heart Failure[J]. <i>Signal Transduction and Targeted Therapy</i> , 2023, 8(1): 121.	Cancer Cardiovascular	38.104
Mouse HIF-1α	E-EL-M0687	Yang C, Mu G, Zhang Y, et al. Supramolecular Nitric Oxide Depot for Hypoxic Tumor Vessel Normalization and Radiosensitization[J]. <i>Advanced Materials</i> , 2022, 34(37): 2202625.	Cancer Cardiovascular	32.086
Mouse CTGF	E-EL-M0340	Avraham S, Abu-Sharki S, Shofti R, et al. Early Cardiac Remodeling Promotes Tumor Growth and Metastasis[J]. <i>Circulation</i> , 2020, 142(7): 670-683.	Cancer Cardiovascular	23.603
Human PR3	E-EL-H1970	Ebert M, Jerke U, Eulenberg-Gustavus C, et al. Protective α1-Antitrypsin Effects in Autoimmune Vasculitis are Compromised by Methionine Oxidation[J]. <i>The Journal of Clinical Investigation</i> , 2022, 132(23).	Cardiovascular Immunology	19.456

Target	Cat.No.	Literature Information	Research Area	Impact Factor
Rat NSE	E-EL-R0058	Yang J, Wang P, Jiang X, et al. A Nanotherapy of Octanoic Acid Ameliorates Cardiac Arrest/Cardiopulmonary Resuscitation-Induced Brain Injury via RVG29-and Neutrophil Membrane-Mediated Injury Relay Targeting[J]. ACS nano, 2023, 17(4): 3528-3548.	Cardiovascular Immunology Neuroscience	18.027
AA(Arachidonic Acid)	E-EL-0051	Liu H, Liu Y, Wang H, et al. Geometric Constraints Regulate Energy Metabolism and Cellular Contractility in Vascular Smooth Muscle Cells by Coordinating Mitochondrial DNA Methylation[J]. Advanced Science, 2022, 9(32): 2203995.	Cardiovascular Metabolism	17.521
Mouse D2D (D-Dimer)	E-EL-M0400	Strittmatter T, Wang Y, Bertschi A, et al. Programmable DARPIn-Based Receptors for the Detection of Thrombotic Markers[J]. Nature Chemical Biology, 2022, 18(10): 1125-1134.	Cardiovascular	16.174
Mouse S100B	E-EL-M1033	Lundy D J, Lee K J, Peng I C, et al. Inducing a Transient Increase in Blood-Brain Barrier Permeability for Improved Liposomal Drug Therapy of Glioblastoma Multiforme[J]. ACS nano, 2018, 13(1): 97-113.	Cancer Cardiovascular	15.881
Human VEGF-A	E-EL-H0111/ E-TSEL-H0026	Ma T, Hao Y, Li S, et al. Sequential Oxygen Supply System Promotes Peripheral Nerve Regeneration by Enhancing Schwann Cells Survival and Angiogenesis[J]. Biomaterials, 2022, 289: 121755.	Cardiovascular Neuroscience	15.304



## Brochures for Other Research Areas

